IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:** Gwong-Jen J. Chang

**Patent No.** 7,417,136

**Issued:** August 26, 2008

**Application No.** 09/701,536

**Filed:** June 18, 2001

**Confirmation No.** 5492

**For:** NUCLEIC ACID VACCINES FOR
PREVENTION OF FLAVIVIRUS
INFECTION

**Examiner:** Jeffrey S. Parkin, Ph.D.

**Art Unit:** 1648

**Attorney Reference No.** 6395-64907-01

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REQUEST FOR CERTIFICATE OF CORRECTION

The following errors were noted in the printed patent:

In Other Publications (Section (56)):

On Page 1, under Lin *et al.*: "Elicitis" should read –Elicits–

On Page 1, under Wang *et al.*: "*Virology* 288:" should read –*Virology* 228–

On Page 3, Column 1, line 32: "NS$_1$" should read –NS1–

On Page 3, Column 1, line 33: "Overwriting" should read –Overwintering–

On Page 3, Column 2, line 22: "submit" should read –subunit–

In the Specification:

Column 1, line 26: "*yellow fever virus. JEV,*" should read –*yellow fever virus, JEV,* –

Column 1, line 29: "others Altogether" should read –*others.* Altogether–

Column 1, line 30: "(1998))" should read –(1998)). –

Column 1, line 41: "virions M" should read –virions. M–

Column 1, line 62: "(1990))" should read –(1990)). –

Column 2, line 7: "(1985))" should read –(1985)). –

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Column 2, line 39: "viremia" should read –viremia.–

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Column 2, line 43: "do not have" should read –do have–

Column 2, line 44: "advantages The" should read –advantages.  The–

Column 2, line 45: "host Such" should read –host.  Such–

Column 2, line 46: "expensive Furthermore," should read –expensive.
Furthermore, –

Column 2, line 54: "disease" should read –disease.–

Column 2, line 56: "WO 93/06214 The" should read –WO 93/06214.  The–

Column 2, line 60 "*JEV*" should read –*JEV*.–

Column 2, line 63: "glycoprotien" should read –glycoprotein–

Column 3, line 3: "vaccine" should read –vaccine.–

Column 3, line 7: "*JEV* Recombinant" should read –*JEV*.  Recombinant–

Column 3, line 13: "NS2B These" should read –NS2B.  These–

Column 3, line 26: "(1992)) Dmitriev et al." should read –(1992)).  Dmitiriev *et
al.* –

Column 3, line 31: "fever Zhao" should read –fever.  Zhao–

Column 3, line 49: "(1989)) Also" should read –(1989)).  Also–

Column 3, line 61: "(1997)) Plasmid" should read –(1997)).  Plasmid–

Column 3, line 63: "immunization In" should read –immunization.  In–

Column 4, line 4: "(Kochel et al.) Challenge" should read –(Kochel *et al.*).
Challenge) –

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Column 4, line 33: "immunity There" should read –immunity.  There–

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Column 4, line 49: "(*JEV*) In important" should read –(*JEV*).  In important–

Column 4, lines 50-51: "both In" should read –both.  In–

Column 4, line 53: "antigens In" should read –antigens.  In–

Column 5, lines 2-3: "anti-gens" should read –anti-gens. –

Column 5, line 11: "carrier In" should read –carrier.  In–

Column 5, lines 13-14: "*JEV* Fur-thermore," should read –*JEV*.  Fur-thermore,–

Column 5, line 25: "terminator" should read –terminator.–

Column 5, lines 52-53: "promoter Further-more," should read –promoter.
Further-more, –

Column 5, line 66: "protecting" should read –protective–

Column 6, line 4: "inventory" should read –inventor–

Column 6, line 5: "acid is conferring" should read –acid in conferring–

Column 6, line 35: "PCIBamp" should read –pCIBamp–

Column 6, line 53: "pair) The" should read –pair).  The–

Column 6, line 56: "ascetic" should read –ascitic–

Column 6, line 58: "ascetic fluid)" should read –ascitic fluid).–

Column 7, line 4: "*St. Lous*" should read –*St. Louis*–

Column 7, line 15: "HIAF Viral" should read –HIAF.  Viral–

Column 7, line 17: "respectively" should read –respectively.–

Column 7, line 33: "molecules" should read –molecules.–

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Column 8, line 10: "TU In particular" should read –TU.  In particular–

Column 8, line 12: "cell In particular" should read –cell.  In particular–

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Column 8, line 41: "organisms" should read –organisms.–

Column 8, line 45: "graph As" should read –graph.  As–

Column 8, line 47: "TU The" should read –TU.  The–

Column 8, line 63: "reference)" should read –reference). –

Column 9, line 1: "*St. Lous*" should read –*St. Louis*–

Column 9, line 4: "molecules They" should read –molecules.  They–

Column 9, line 7: "agent Modifications" should read –agent.  Modifications–

Column 9, line 11: "chemistry" should read –chemistry.–

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Column 9, line 28: "virions" should read –virions.–

Column 9, line 29: "vivo or a" should read –vivo as a–

Column 9, line 39: "quarterly)) Since" should read –quarterly)).  Since–

Column 9, line 42: "is mammalian cells Such" should read –in mammalian cells.

Such–

Column 9, line 44: "operable" should read –operably–

Column 9, lines 44-45: "transla-tion In" should read –transla-tion.  In–

Column 9, line 46: "promoter In" should read –promoter.  In–

Column 9, line 60: "quarterly) The" should read –quarterly).  The–

Column 9, line 62: "flavirridae" should read –flaviviridae–

Column 9, line 64: "(1990) The" should read –(1990).  The–

Column 9, line 66: "scriptase From" should read –scriptase.  From–

Column 10, line 2: "fragments Examples" should read –fragments.  Examples–

Column 10, line 4: "(1991) Incorporation" should read –(1991).  Incorporation–

Column 10, line 7: "engineering When" should read –engineering.  When–

Column 10, line 8: "acid harboring" should read –acid molecule harboring–

Column 10, lines 9-10: "fragment Such" should read –fragment.  Such–

Column 10, lines 12-13: "engineering Examples" should read –engineering.

Examples–

Column 10, line 20: "obtained" should read –obtained. –

Column 10, line 35: "antigens A suitable" should read –antigens.  A suitable–

Column 10, line 37: "acid In particular" should read –acid.  In particular–

Column 10, line 40: "TU In" should read –TU.  In–

Column 10, line 44: "functions When" should read –functions.  When–

Column 10, line 49: "purposes" should read –purposes.–

Column 10, line 52: "particles These" should read –particles.  These–

Column 10, line 56: "genone" should read –genome–

Column 10, line 60: "vaccine The" should read –vaccine.  The–

Column 11, line 8: "limited b theory," should read –limited by theory,–

Column 11, line 12: "mechanisms" should read –mechanisms.–

Column 11, line 16: "antigens The" should read –antigens.  The–

Column 11, lines 18-19: "anti-gens" should read –anti-gens.–

Column 11, line 23: "science They" should read –science.  They–

Column 11, line 25: "Sciences) They" should read –Sciences).  They–

Column 11, line 38: "administered One" should read –administered.  One–

Column 11, line 43: "*degue*," should read –*dengue,*–

Column 11, line 56: "100%" should read –100%.–

Column 11, line 59: "subject A significant" should read –subject.  A significant–

Column 11, line 62: "invention Without" should read –invention.  Without–

Column 11, line 64: "material" should read –maternal–

Column 11, line 67: "way" should read –way.–

Column 12, line 32: "Kpn1" should read –KpnI–

Column 12, line 36: "codone" should read –codon–

Column 12, line 43: "heater" should read –heated–

Column 12, line 58: "1989) RT-PCR" should read –1989).  RT-PCR–

Column 12, line 59: "Kpn1" should read –KpnI–

Column 12, line 61: "(pCDNA2," should read –(pCDNA3,–

Column 13, line 7: "1990)" should read –1990).–

Column 13, line 13: "Nco1/Kpn1" should read –NcoI/KpnI–

Column 13, line 15: "pC1" should read –pCI–

Column 13, line 16: "Kpn1 The" should read –Kpn1.  The–

Column 13, line 18: "fragment FIG. 3" should read –fragment.  FIG. 3–

Column 13, line 19: "PCIBamp" should read –pCIBamp.–

Column 13, line 49: "(IFA) The" should read –(IFA).  The–

Column 13, line 51: "positive For" should read –positive.  For–

Column 14, lines 1-2: "per mL 10 µg" should read –per mL.  10 µg–

Column 14, line 6: "flask 48 h" should read –flask.  48 h–

Column 14, line 9: "serum 10 µL" should read –serum.  10 µL–

Column 14, line 10: "20 min IFA was" should read –20 min.  IFA was–

Column 14, line 14: "H1AF" should read –HIAF–

Column 14, line 18: "pCDEJE2-7, pCEJE, or pRCJE" should read –pCDJE2-7, pCEJE, pREJE, or pRCJE–

Column 14, line 44: "sequence Following" should read –sequence.  Following–

Column 14, line 47: "Table 1) This" should read – Table 1).  This–

Column 14, line 51: "used Vectors" should read –used.  Vectors–

Column 14, line 53: "analysis" should read –analysis.–

Column 14, line 61: "anitgen-positive" should read –antigen-positive–

Column 14, line 65: "pC1Bamp" should read –pCIBamp–

Column 14, line 65: "pC1BJES14" should read –pCIBJES14–

Column 15, line 15: "(negative control). pCDJE2-7." should read –(negative control), pCDJE2-7,–

Column 15, line 16: "pC1BJES14, pCEJEm pREJE, or pRCJE, Cells" should read –pCIBJES14, pCEJE, pREJE.  Cells–

Column 15, line 18: "cells The" should read –cells.  The–

Column 15, line 28: "mg. mL," should read –mg/mL,–

Column 15, line 29: "Neomycin-resistance" should read –Neomycin-resistant–

Column 15, line 31: "medium Expression" should read –medium.  Expression–

Column 15, line 35: "neomycin" should read –neomycin.–

Column 15, line 42: "(1983)) *JEV*" should read –(1983)).  *JEV*–

Column 15, line 64: "1-" should read –1+–

Column 16, line 33: "H1AF" should read –HIAF–

Column 16, line 49: "days Culture" should read –days.  Culture–

Column 16, line 54: "(TN buffer)) The" should read –(TN buffer)).  The–

Column 16, line 57: "medium The" should read –medium.  The–

Column 16, line 67: "TN This" should read –TN.  This–

Column 17, line 8: "buffer Antigen-capture" should read –buffer.  Antigen-capture–

Column 17, line 14: "gradient" should read –gradient.–

Column 17, line 15: "particles Gradient" should read –particles.  Gradient–

Column 17, line 19: "(1970)) Proteins" should read –(1970)).  Proteins–

Column 17, lines 28-29: "serum Pro-teins" should read –serum.  Pro-teins–

Column 17, line 31: "respectively" should read –respectively.–

Column 17, line 44: "seeded PEG-precipitated" should read –seeded.  PEG-precipitated–

Column 17, line 46: "0 7 mL" should read –0.7 mL–

Column 17, line 47: "gradient Triton" should read –gradient.  Triton–

Column 18, line 1: "(FIG. **5**) Antigen" should read –(FIG. **5**).  Antigen–

Column 18, line 3: particles Treatment" should read –particles.  Treatment–

Column 18, line 7: "molecules A similar" should read –molecules.  A similar–

Column 18, line 8: "714-720)" should read –714-720).–

Column 18, line 11: "treatment" should read –treatment.–

Column 18, line 17: "to be 6.6" should read –to be 6.6.–

Column 18, line 23: "JCR" should read –ICR–

Column 18, line 34: "JE-VAX Mice" should read –JE-VAX.  Mice–

Column 18, lines 36-37: "imunosorbent" should read –immunosorbent–

Column 18, line 40: "(1979))" should read –(1979)).–

Column 18, line 43: "(Table 3) The" should read –(Table 3).  The–

Column 18, line 51: "nay" should read –any–

Column 18, line 54: "vaccine" should read –vaccine.–

Column 18, line 58: "JE-VEX" should read –JE-VAX–

Column 19, line 3: "JE-VEX" should read –JE-VAX–

Column 19, line 12: "vaccine Sera" should read –vaccine.  Sera–

Column 19, line 23: "PCIBJES14" should read –pCIBJES14–

Column 19, line 30: "1.1600" should read –1:1600–

Column 19, line 31: "Table 4" should read –Table 4.–

Column 19, line 33: "1 1600" should read –1:1600–

Column 19, line 34: "vaccination Administration" should read –vaccination. Administration–

Column 19, line 46: "animals" should read –animals.–

Column 19, line 57: "pC1BJES14" should read –pCIBJES14–

Column 19, line 67: "3 weeks 100%" should read –3 weeks.  100%–

Column 20, line 16: "(Table 5) In" should read –(Table 5).  In–

Column 20, line 19: "days These" should read –days.  These–

Column 20, line 21: "mice This" should read –mice.  This–

Column 20, line 50: "vaccination Pups" should read –vaccination.  Pups–

Column 20, line 53: "6) The" should read –6).  The–

Column 20, line 55: "1.80" should read –1:80–

Column 20, line 57: "6) Partial" should read –6).  Partial–

Column 20, line 59: "1.20 and 1.40," should read –1:20 and 1:40,–

Column 20, line 61: "mother As" should read –mother.  As–

Column 20, line 62: "rates None" should read –rates.  None–

Column 20, line 67: "pups" should read –pups.–

Column 21, line 20: "2. 100 µg" should read –2 100 µg–

Column 21, line 21: "DNA. or subcutaneously with two. 1/5 human dose of JE-VAX vaccine Sera" should read –DNA or subcutaneously with two 1/5 human dose of JE-VAX vaccine.  Sera–

Column 21, line 23: "non-immune male" should read – non-immune male.–

Column 21, line 24: "No Survivors total for" should read –No.  Survivors/total–

Column 21, line 36: "QIAAM" should read –QIAAMP–

Column 21, lines 42-43: "inserted with the" should read –inserted into the–

Column 21, line 54: "control As" should read –control.  As–

Column 22, line 3: "proteins Epitope" should read –proteins.  Epitope–

Column 22, line 6: "cells A" should read –cells.  A–

Column 22, line 7: "JCR" should read –ICR–

Column 22, line 8: "servoconverted" should read –seroconverted–

Column 22, line 10: "water" should read –water.–

Column 22, line 16: "antigens" should read –antigens.–

Column 22, line 29: "procedure A" should read –procedure.  A–

Column 22, line 46: "genes The" should read –genes.  The–

Column 22, line 49: "intervals At" should read –intervals.  At–

Column 22, line 52: "*virus* Levels" should read –*virus*.  Levels–

Column 22, line 54: "day Passive" should read –day.  Passive–


In the Claims:

Column 29, line 28: "1virus" should read –1 virus–

Column 29, line 30: "*St. Lous*" should read –*St. Louis*–

Column 29, lines 49-50: "*St. Lous*" should read –*St. Louis*–

Column 30, line 28: "*St. Lous*" should read –*St. Louis*–


Since not all of the errors are attributable to the Patent Office, the fee of $100.00 pursuant to 37 C.F.R. 1.20(a) is being submitted herewith via EFS, from Deposit Account 02-4550.  The preceding corrections remedy mistakes of a typographical nature and/or minor character.  A Certificate of Correction is submitted herewith to make formal notice of the errors in the referenced patent.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

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121 S.W. Salmon Street
Portland, Oregon 97204            By      /Jodi L. Connolly/
Telephone:  (503) 595-5300                Jodi L. Connolly, Ph.D.
Facsimile:  (503) 595-5301                Registration No. 54,044

cc:  Docketing

# UNITED STATES PATENT AND TRADEMARK OFFICE
## CERTIFICATE OF CORRECTION

PATENT NO.    : 7,417,136

DATED          : August 26, 2008

INVENTOR(S)   : Gwong-Jen J. Chang

   It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<u>In Other Publications (Section (56)):</u>

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Column 11, line 25: "Sciences) They" should read –Sciences).  They–

Column 11, line 38: "administered One" should read –administered.  One–

Column 11, line 43: *"degue,"* should read *–dengue,–*

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## UNITED STATES PATENT AND TRADEMARK OFFICE
## CERTIFICATE OF CORRECTION

PATENT NO.      : 7,417,136

DATED            : August 26, 2008

INVENTOR(S)   : Gwong-Jen J. Chang

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 11, line 56: "100%" should read –100%.–

Column 11, line 59: "subject A significant" should read –subject.  A significant–

Column 11, line 62: "invention Without" should read –invention.  Without–

Column 11, line 64: "material" should read –maternal–

Column 11, line 67: "way" should read –way.–

Column 12, line 32: "Kpn1" should read –KpnI–

Column 12, line 36: "codone" should read –codon–

Column 12, line 43: "heater" should read –heated–

Column 12, line 58: "1989) RT-PCR" should read –1989).  RT-PCR–

Column 12, line 59: "Kpn1" should read –KpnI–

Column 12, line 61: "(pCDNA2," should read –(pCDNA3,–

Column 13, line 7: "1990)" should read –1990).–

Column 13, line 13: "Nco1/Kpn1" should read –NcoI/KpnI–

Column 13, line 15: "pC1" should read –pCI–

Column 13, line 16: "Kpn1 The" should read –Kpn1.  The–

Column 13, line 18: "fragment FIG. 3" should read –fragment.  FIG. 3–

Column 13, line 19: "PCIBamp" should read –pCIBamp.–

Column 13, line 49: "(IFA) The" should read –(IFA).  The–

Column 13, line 51: "positive For" should read –positive.  For–

Column 14, lines 1-2: "per mL 10 µg" should read –per mL.  10 µg–

Column 14, line 6: "flask 48 h" should read –flask.  48 h–

Column 14, line 9: "serum 10 µL" should read –serum.  10 µL–

Column 14, line 10: "20 min IFA was" should read –20 min.  IFA was–

Column 14, line 14: "H1AF" should read –HIAF–

Column 14, line 18: "pCDEJE2-7, pCEJE, or pRCJE" should read –pCDJE2-7, pCEJE, pREJE, or pRCJE–

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It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 14, line 44: "sequence Following" should read –sequence.  Following–

Column 14, line 47: "Table 1) This" should read – Table 1).  This–

Column 14, line 51: "used Vectors" should read –used.  Vectors–

Column 14, line 53: "analysis" should read –analysis.–

Column 14, line 61: "anitgen-positive" should read –antigen-positive–

Column 14, line 65: "pC1Bamp" should read –pCIBamp–

Column 14, line 65: "pC1BJES14" should read –pCIBJES14–

Column 15, line 15: "(negative control). pCDJE2-7." should read –(negative control), pCDJE2-7,–

Column 15, line 16: "pC1BJES14, pCEJEm pREJE, or pRCJE, Cells" should read –pCIBJES14, pCEJE, pREJE.  Cells–

Column 15, line 18: "cells The" should read –cells.  The–

Column 15, line 28: "mg. mL," should read –mg/mL,–

Column 15, line 29: "Neomycin-resistance" should read –Neomycin-resistant–

Column 15, line 31: "medium Expression" should read –medium.  Expression–

Column 15, line 35: "neomycin" should read –neomycin.–

Column 15, line 42: "(1983)) JEV" should read –(1983)).  JEV–

Column 15, line 64: "1-" should read –1+–

Column 16, line 33: "H1AF" should read –HIAF–

Column 16, line 49: "days Culture" should read –days.  Culture–

Column 16, line 54: "(TN buffer)) The" should read –(TN buffer)).  The–

Column 16, line 57: "medium The" should read –medium.  The–

Column 16, line 67: "TN This" should read –TN.  This–

Column 17, line 8: "buffer Antigen-capture" should read –buffer.  Antigen-capture–

Column 17, line 14: "gradient" should read –gradient.–

Column 17, line 15: "particles Gradient" should read –particles.  Gradient–

Column 17, line 19: "(1970)) Proteins" should read –(1970)).  Proteins–

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DATED          : August 26, 2008

INVENTOR(S)   : Gwong-Jen J. Chang

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 17, lines 28-29: "serum Pro-teins" should read –serum. Pro-teins–

Column 17, line 31: "respectively" should read –respectively.–

Column 17, line 44: "seeded PEG-precipitated" should read –seeded. PEG-precipitated–

Column 17, line 46: "0 7 mL" should read –0.7 mL–

Column 17, line 47: "gradient Triton" should read –gradient. Triton–

Column 18, line 1: "(FIG. 5) Antigen" should read –(FIG. 5). Antigen–

Column 18, line 3: particles Treatment" should read –particles. Treatment–

Column 18, line 7: "molecules A similar" should read –molecules. A similar–

Column 18, line 8: "714-720)" should read –714-720).–

Column 18, line 11: "treatment" should read –treatment.–

Column 18, line 17: "to be 6.6" should read –to be 6.6.–

Column 18, line 23: "JCR" should read –ICR–

Column 18, line 34: "JE-VAX Mice" should read –JE-VAX. Mice–

Column 18, lines 36-37: "imunosorbent" should read –immunosorbent–

Column 18, line 40: "(1979))" should read –(1979)).–

Column 18, line 43: "(Table 3) The" should read –(Table 3). The–

Column 18, line 51: "nay" should read –any–

Column 18, line 54: "vaccine" should read –vaccine.–

Column 18, line 58: "JE-VEX" should read –JE-VAX–

Column 19, line 3: "JE-VEX" should read –JE-VAX–

Column 19, line 12: "vaccine Sera" should read –vaccine. Sera–

Column 19, line 23: "PCIBJES14" should read –pCIBJES14–

Column 19, line 30: "1.1600" should read –1:1600–

Column 19, line 31: "Table 4" should read –Table 4.–

Column 19, line 33: "1 1600" should read –1:1600–

Column 19, line 34: "vaccination Administration" should read –vaccination. Administration–

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**CERTIFICATE OF CORRECTION**

PATENT NO.      : 7,417,136

DATED           : August 26, 2008

INVENTOR(S)   : Gwong-Jen J. Chang

　　　　　It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 19, line 46: "animals" should read –animals.–

Column 19, line 57: "pC1BJES14" should read –pCIBJES14–

Column 19, line 67: "3 weeks 100%" should read –3 weeks.  100%–

Column 20, line 16: "(Table 5) In" should read –(Table 5).  In–

Column 20, line 19: "days These" should read –days.  These–

Column 20, line 21: "mice This" should read –mice.  This–

Column 20, line 50: "vaccination Pups" should read –vaccination.  Pups–

Column 20, line 53: "6) The" should read –6).  The–

Column 20, line 55: "1.80" should read –1:80–

Column 20, line 57: "6) Partial" should read –6).  Partial–

Column 20, line 59: "1.20 and 1.40," should read –1:20 and 1:40,–

Column 20, line 61: "mother As" should read –mother.  As–

Column 20, line 62: "rates None" should read –rates.  None–

Column 20, line 67: "pups" should read –pups.–

Column 21, line 20: "2. 100 µg" should read –2 100 µg–

Column 21, line 21: "DNA. or subcutaneously with two. 1/5 human dose of JE-VAX vaccine Sera" should read –DNA or subcutaneously with two 1/5 human dose of JE-VAX vaccine.  Sera–

Column 21, line 23: "non-immune male" should read – non-immune male.–

Column 21, line 24: "No Survivors total for" should read –No.  Survivors/total–

Column 21, line 36: "QIAAM" should read –QIAAMP–

Column 21, lines 42-43: "inserted with the" should read –inserted into the–

Column 21, line 54: "control As" should read –control.  As–

Column 22, line 3: "proteins Epitope" should read –proteins.  Epitope–

Column 22, line 6: "cells A" should read –cells.  A–

Column 22, line 7: "JCR" should read –ICR–

Column 22, line 8: "servoconverted" should read –seroconverted–

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## CERTIFICATE OF CORRECTION

PATENT NO. : 7,417,136

DATED   : August 26, 2008

INVENTOR(S) : Gwong-Jen J. Chang

   It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 22, line 10: "water" should read –water.–

Column 22, line 16: "antigens" should read –antigens.–

Column 22, line 29: "procedure A" should read –procedure.  A–

Column 22, line 46: "genes The" should read –genes.  The–

Column 22, line 49: "intervals At" should read –intervals.  At–

Column 22, line 52: "*virus* Levels" should read –*virus*.  Levels–

Column 22, line 54: "day Passive" should read –day.  Passive–


In the Claims:

Column 29, line 28: "1virus" should read –1 virus–

Column 29, line 30: "*St. Lous*" should read –*St. Louis*–

Column 29, lines 49-50: "*St. Lous*" should read –*St. Louis*–

Column 30, line 28: "*St. Lous*" should read –*St. Louis*–

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